

Listing of the Claims

1. (Currently Amended) A method comprising:
assigning a priority level to a cache allocation request;
identifying an allocation probability associated with the cache allocation request
based on the priority level; and
identifying the cache allocation request with one of an allocate condition ~~and~~ or a
bypass condition ~~based on the allocation probability~~ by comparing the allocation probability
with at least one of a randomly-generated number or a pre-determined number.
2. (Currently Amended) A method as defined in claim 1, wherein assigning the
priority level to the cache allocation request comprises assigning the priority level to the
cache allocation request based on at least one of stream type, source type, ~~and~~ or a cache
occupancy map.
3. (Currently Amended) A method as defined in claim 1, wherein assigning a
priority level to the cache allocation request comprises assigning a priority level to at least
one of a cache allocation request associated with a primary host application, a cache
allocation request associated with a secondary host application, ~~and~~ or a cache allocation
request associated with a peripheral application.
4. (Cancelled)

5. (Currently Amended) A method as defined in claim 1, wherein identifying the cache allocation request with one of an allocate condition ~~and~~ or a bypass condition ~~based on the allocation probability~~ comprises identifying the cache allocation request with the allocate condition in response to the allocation probability being greater than ~~or equal to~~ at least one of ~~[[a]]~~ the randomly-generated number ~~and a~~ or the pre-determined number.

6. (Currently Amended) A method as defined in claim 1, wherein identifying the cache allocation request with one of an allocate condition ~~and~~ or a bypass condition ~~based on the allocation probability~~ comprises identifying the cache allocation request with the bypass condition in response to the allocation probability being less than ~~at least one of~~ or equal to at least one of the randomly-generated number ~~and a~~ or the pre-determined number.

7. (Original) A method as defined in claim 1 further comprising allocating a portion of a cache to the cache allocation request in response to identifying the cache allocation request with the allocate condition and denying the cache allocation request in response to identifying the cache allocation request with the bypass condition.

8. (Currently Amended) A machine accessible medium storing instructions, ~~which~~ when executed, cause a processing system to:

- assign a priority level to a cache allocation request;
- identify an allocation probability associated with the cache allocation request based on the priority level; and

identify the cache allocation request with one of an allocate condition ~~and~~ or a bypass condition ~~based on the allocation probability by comparing the allocation probability with at least one of a randomly-generated number or a pre-determined number.~~

9. (Currently Amended) A machine accessible medium as defined in claim 8, wherein the instructions, when executed, cause the machine to assign a priority level to the cache allocation request by assigning the priority level to the cache allocation request based on at least one of stream type, source type, ~~and~~ or a cache occupancy map.

10. (Currently Amended) A machine accessible medium as defined in claim 8, wherein the instructions, when executed, cause the machine to assign the priority level to the cache allocation request by assigning a priority level to at least one of a cache allocation request associated with a primary host application, a cache allocation request associated with a secondary host application, ~~and~~ or a cache allocation request associated with a peripheral application.

11. (Cancelled)

12. (Currently Amended) A machine accessible medium as defined in claim 8, wherein the instructions, when executed, cause the machine to identify the cache allocation request with one of the allocate condition ~~and~~ or the bypass condition ~~based on the allocation probability~~ by identifying the cache allocation request with the allocate condition in response to the allocation probability being greater than ~~or equal to~~ at least one of ~~[[a]]~~ the randomly-generated number ~~and a~~ or the pre-determined number.

13. (Currently Amended) A machine accessible medium as defined in claim 8, wherein the instructions, when executed, cause the machine to identify the cache allocation request with one of the allocate condition ~~and~~ or the bypass condition ~~based on the allocation probability~~ by identifying the cache allocation request with the bypass condition in response to the allocation probability being less than or equal to at least one of the randomly-generated number ~~and a~~ or the pre-determined number.

14. (Currently Amended) A machine accessible medium as defined in claim 8, wherein the instructions, ~~which~~ when executed, cause the machine to allocate a portion of a cache to the cache allocation request in response to identifying the cache allocation request with the allocate condition, and to deny the cache allocation request in response to identifying the cache allocation request with the bypass condition.

15. (Currently Amended) A machine accessible medium as defined in claim 8, wherein the machine readable medium comprises one of a programmable gate array, application specific integrated circuit, erasable programmable read only memory, read only memory, random access memory, magnetic media, ~~and~~ or optical media.

16. (Currently Amended) An apparatus comprising:
a cache to store one or more data blocks of cache allocation requests;
a priority assignment unit to assign a priority level to a cache allocation request; and
a cache controller to identify an allocation probability associated with the cache allocation request based on the priority level, and to identify the cache allocation request with

one of an allocate condition ~~and~~ or a bypass condition ~~based on the allocation probability by~~
comparing the allocation probability with at least one of a randomly-generated number or a
pre-determined number.

17. (Currently Amended) An apparatus as defined in claim 16, wherein the cache allocation request comprises at least one of a cache allocation request associated with a primary host application, a cache allocation request associated with a secondary host application, ~~and~~ or a cache allocation request associated with a peripheral application.

18. (Currently Amended) An apparatus as defined in claim 16, wherein the priority assignment unit comprises at least one of an operating system, a compiler, ~~and~~ or an application specific integrated circuit.

19. (Currently Amended) An apparatus as defined in claim 16, wherein the cache controller is to assign the priority level to the cache allocation request based on at least one of stream type, source type, ~~and~~ or a cache occupancy map.

20. (Cancelled)

21. (Currently Amended) An apparatus as defined in claim 16, wherein the cache controller is to identify the cache allocation request with the allocate condition in response to the allocation probability being greater than ~~or equal to~~ at least one of ~~[[a]]~~ the randomly-generated number ~~and a~~ or the pre-determined number.

22. (Currently Amended) An apparatus as defined in claim 16, wherein the cache controller is to identify the cache allocation request with the bypass condition in response to the allocation probability being less than ~~at least one of~~ or equal to at least one of the randomly-generated number ~~and a~~ or the pre-determined number.

23. (Original) An apparatus as defined in claim 16, wherein the cache controller is to allocate a portion of the cache to the cache allocation request in response to identifying the cache allocation request with the allocate condition.

24. (Currently Amended) A processor system comprising:
a static random access memory (SRAM) to store one or more data blocks of cache allocation requests; and
a processor coupled to the SRAM, the processor to:
assign a priority level to a cache allocation request;
identify an allocation probability associated with the cache allocation request based on the priority level; and
identify the cache allocation request with one of an allocate condition and a bypass condition ~~based on the allocation probability~~ by comparing the allocation probability with at least one of a randomly-generated number or a pre-determined number.

25. (Currently Amended) A processor system as defined in claim 24, wherein the cache allocation request comprises at least one of a cache allocation request associated with a primary host application, a cache allocation request associated with a secondary host application, ~~and~~ or a cache allocation request associated with a peripheral application.

26. (Currently Amended) A processor system as defined in claim 24, wherein the processor is to assign the priority level to the cache allocation request based on at least one of stream type, source type, ~~and~~ or a cache occupancy map.

27. (Cancelled)

28. (Currently Amended) A processor system as defined in claim 24, wherein the processor is to identify the cache allocation request with the allocate condition in response to ~~in response to~~ the allocation probability being greater than ~~or equal to~~ at least one of ~~[[a]]~~ the randomly-generated number ~~and a~~ or the pre-determined number.

29. (Currently Amended) A processor system as defined in claim 24, wherein the processor is to identify the cache allocation request with the bypass condition in response to the allocation probability being less than or equal to at least one of the randomly-generated number ~~and a~~ or the pre-determined number.

30. (Original) A processor system as defined in claim 24, wherein the processor is to allocate a portion of the SRAM to the cache allocation request in response to identifying the cache allocation request with the allocate condition.